IN THE CLAIMS

Please amend the claims in accordance with the following listing. This claim listing supersedes and replaces all prior listings of the claims.

1. (Original) A method of attaching hydrophilic species to hydrophilic macromolecules and immobilizing the hydrophilic macromolecules on a hydrophobic surface, said method comprising the steps:

- exposing hydrophilic macromolecules to hydrophilic species whereby the hydrophilic species are attached to the hydrophilic macromolecules,
- providing a hydrophobic surface,
- immobilizing the hydrophilic macromolecules on the hydrophobic surface.

2. (Original) A method of attaching hydrophilic species to hydrophilic macromolecules immobilized on a hydrophobic surface, said method comprising the steps:

- providing a hydrophobic surface,
- immobilizing hydrophilic macromolecules on the hydrophobic surface,
- exposing the hydrophilic macromolecules immobilized on the hydrophobic surface to hydrophilic species, whereby the hydrophilic species are attached to the hydrophilic macromolecules.

3. (Previously presented) A method according to claim 1 or claim 2, characterized in that the hydrophilic species comprises nanoparticles.

4. (Previously presented) A method according to claim 1 or claim 2, characterized in that the hydrophilic species is in solution.

5. (Previously presented) A method according to claim 1 or claim 2, comprising the additional step:

- growing the attached hydrophilic species to a larger size.

6. (Original) A method according to claim 5, characterized in that growing the attached hydrophilic species to a larger size is achieved by exposing the attached hydrophilic species to an electroless plating solution.

7. (Previously presented) A method according to claim 1 or claim 2, characterized in that immobilizing the hydrophilic macromolecules on the hydrophobic surface occurs by applying the hydrophilic macromolecules to the hydrophobic surface.

8. (Original) A method according to claim 7, characterized in that applying the hydrophilic macromolecules to the hydrophobic surface occurs by a process selected from spin-coating, dip-coating, drop-casting, stamping, molecular combing, spraying-techniques, inkjet-printing and doctor-blading.

9. (Previously presented) A method according to claim 1 or claim 2, characterized in that exposing the hydrophilic macromolecules to hydrophilic species, whereby the hydrophilic

species are attached to the hydrophilic macromolecules, occurs over a period of time between 1 second and 120 minutes.

10. (Original) A method according to claim 9, characterized in that exposing the hydrophilic macromolecules to hydrophilic species occurs over a period of time between 10 seconds and 10 minutes.

11. (Previously presented) A method according to claim 4, characterized in that the solution is a solution of the hydrophilic species in water or of the hydrophilic species in a water-miscible organic solvent/water mixture.

12. (Previously presented) A method according to claim 1 or claim 2, characterized in that water has a contact angle on the hydrophobic surface in the range of from 30° to 110°.

13. (Original) A method according to claim 12, characterized in that water has a contact angle on the hydrophobic surface in the range of from 60° to 110°.

14. (Previously presented) A method according to claim 1 or claim 2, characterized in that the hydrophilic species is selected from the group comprising water soluble metal nanoparticles, semiconductor nanoparticles and dielectric (insulator) nanoparticles, hydrophilic clusters and metallic complexes.

15. (Previously presented) A method according to claim 3, characterized in that the nanoparticle has a core and comprises a metal or metal oxide in the core, where the metal is selected from the group comprising Fe, Co, Ni, Cu, Ru, Rh, Pd, Os, Ir, Ag, Pt, Au or combinations, especially alloys of these metals.

16. (Previously presented) A method according to claim 1 or claim 2, characterized in that the hydrophilic macromolecules are selected from the group comprising nucleic acids, proteins, dendrimers, latex spheres, polyelectrolytes, and water-soluble polymers.

17. (Original) A method according to claim 16, characterized in that the nucleic acid is selected from the group comprising DNA, RNA, PNA, CNA, oligonuclotides, oligonucleotides of RNA, A-DNA, B-DNA, Z-DNA, polynucleotides of DNA, polynucleotides of RNA, T-junctions of nucleic acids, triplexes of nucleic acid, quadruplexes of nucleic acids, domains of non-nucleic acid polymer-nucleic acid block-copolymers and combinations thereof.

18. (Original) A method according to claim 17, characterized in that the nucleic acid is double-stranded or single-stranded.

19. (Previously presented) A method according to claim 1 or claim 2, characterized in that the hydrophilic species is selected from the group comprising tris(hydroxymethyl)phosphine-gold nanoparticles (THPAuNPs).

20. (Previously presented) A method according to claim 6, characterized in that the electroless plating solution comprises a gold salt and a reducing agent.

21. (Currently amended) A nano-assembly, comprising a hydrophobic surface, hydrophilic macromolecules immobilized on the hydrophobic surface and a hydrophilic species attached to the hydrophilic macromolecules, said nono-assembly produced by the method comprising the steps of:

providing a hydrophobic surface,

immobilizing hydrophilic macromolecules on the hydrophobic surface, and

exposing the hydrophilic macromolecules immobilized on the hydrophobic surface to hydrophilic species, whereby the hydrophilic species are attached to the hydrophilic macromolecules.

22. (Currently amended) Use of a nano-assembly ~~according to claim 21~~ as a nanoscale element in a device, said nono-assembly produced by the method comprising the steps of:

providing a hydrophobic surface,

immobilizing hydrophilic macromolecules on the hydrophobic surface, and

exposing the hydrophilic macromolecules immobilized on the hydrophobic surface to hydrophilic species, whereby the hydrophilic species are attached to the hydrophilic macromolecules.

23. (Original) Use according to claim 22, characterized in that function of the nanoscale element is selected from the group comprising interconnect, sensor, optical absorber, actuator, transducer and memory.